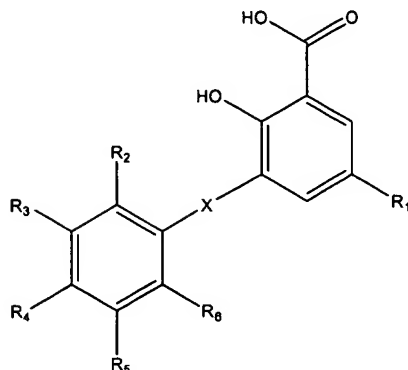


CLAIMS

What is claimed is:

1. A compound having the following structure:



or a stereoisomer, prodrug or pharmaceutically acceptable salt thereof,

wherein:

X is $-\text{CH}_2-\text{Y}-$, $-\text{NH}-\text{C}(=\text{Z})-\text{NH}-$, $-\text{CH}=\text{N}-$ or $-\text{NH}-\text{C}(=\text{O})-$;

Y is $-\text{NH}-$, $-\text{S}-$ or $-\text{N}(\text{SO}_2\text{R}_7)-$;

Z is O or S;

R₁ is hydrogen, halogen, nitro, cyano, alkyl, substituted alkyl, alkoxy, hydroxy, aryl, substituted aryl, $-\text{NHC}(=\text{O})\text{R}'$, heteroaryl or substituted heteroaryl;

R₂, R₃, R₅ and R₆ are the same or different and independently hydrogen, halogen, nitro, cyano, alkyl, substituted alkyl, alkoxy, hydroxy, aryl, substituted aryl, heteroaryl or substituted heteroaryl;

R₄ is hydrogen, halogen, nitro, cyano, alkyl, substituted alkyl, aryl, substituted aryl, arylalkyl, substituted arylalkyl, heteroaryl, substituted heteroaryl, heteroarylalkyl, substituted heteroarylalkyl, $-\text{O}-\text{R}_7$, $-\text{C}(=\text{O})-\text{R}_7$, $-\text{C}(=\text{O})\text{O}-\text{R}_7$, $-\text{C}(=\text{O})-\text{NH}-\text{R}_7$ or $-\text{NHC}(=\text{O})\text{R}''$;

R_7 is hydrogen, alkyl, substituted alkyl, aryl, substituted aryl, arylalkyl or substituted arylalkyl;

R' and R'' are the same or different and independently alkyl, substituted alkyl, aryl, substituted aryl, heteroaryl or substituted heteroaryl; and

R_4 and R_5 or R_5 and R_6 , taken together with the carbon atoms to which they are attached, optionally form a substituted or unsubstituted homocycle.

2. The compound of claim 1 wherein X is $-\text{CH}_2-\text{Y}-$ and Y is $-\text{NH}-$.
3. The compound of claim 1 wherein X is $-\text{CH}_2-\text{Y}-$ and Y is $-\text{S}-$.
4. The compound of claim 1 wherein X is $-\text{CH}_2-\text{Y}-$ and Y is $-\text{N}(\text{SO}_2\text{R}_7)-$.
5. The compound of claim 1 wherein X is $-\text{NH}-\text{C}(=\text{Z})-\text{NH}-$ and Z is O.
6. The compound of claim 1 wherein X is $-\text{NH}-\text{C}(=\text{Z})-\text{NH}-$ and Z is S.
7. The compound of claim 1 wherein X is $-\text{CH}=\text{N}-$.
8. The compound of claim 1 wherein X is $-\text{NH}-\text{C}(=\text{O})-$.
9. A composition comprising a compound of claim 1 in combination with a pharmaceutically acceptable carrier.

10. A method for treating or preventing a condition in a mammal associated with altered mitochondrial function, comprising administering to a mammal in need thereof an effective amount of a composition of claim 9.

11. The method of claim 10 wherein the condition is: Alzheimer's Disease; diabetes mellitus; obesity; Parkinson's Disease; Huntington's disease; dystonia; Leber's hereditary optic neuropathy; schizophrenia; mitochondrial encephalopathy, lactic acidosis, and stroke (MELAS); cancer; psoriasis; hyperproliferative disorders; mitochondrial diabetes and deafness (MIDD); myoclonic epilepsy ragged red fiber syndrome; osteoarthritis; or Friedrich's ataxia.